

METHOD AND CIRCUIT FOR REDUCING VCO NOISE

ABSTRACT OF THE DISCLOSURE

A calibrated VCO for use in a phase-locked loop includes a low frequency calibration block for setting a bias signal for a ring oscillator to a center point to prompt the ring oscillator to generate an oscillation that is in the middle of its output frequency range and a high frequency VCO gm stage for generating an adjustment calibration signal that is added or subtracted to and from the bias signal created by the low frequency calibration block. A low pass filter coupled between the gates of a current mirror of the low frequency calibration block operates to filter noise and interference generated within the low frequency calibration block. Additionally, the magnitude of the bias signal produced by the low frequency calibration block is significantly greater than the adjustment bias signal generated by the high frequency VCO gm stage.